

Are the recent VAT and social investment reforms in Nigeria conducive for social and economic inclusion?*

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Abstract

Poverty, inequality and unemployment are major development challenges in Nigeria. According to data from the National Bureau of Statistics (NBS), poverty, inequality and unemployment are currently about 40.1% (2019), 35.1% (2019) and 33% (2020) respectively. These challenges inspired the government to introduce the cash transfer programme to cushion the effects of these trio. The cash transfer programme gives cash of ₦5,000 monthly to registered households. However, to raise funds to finance the cash transfer and other programmes, the government increase the VAT rate from 5% to 7.5%. This, this paper examines the macroeconomic and welfare impacts of the cash transfer programme, and further investigates the effects of the VAT increase on the effectiveness of the cash transfer programme. The PEP-1-1 CGE model calibrated on Nigeria's updated social accounting matrix (SAM) is used to carry out the impact analysis. The results show the cash transfer programme increases household consumption, household welfare, and real GDP growth while reducing unemployment rate. But the effects are much higher if the cash transfer programme is financed mainly through the budget than when it is financed by the increase in VAT rate. More so, the welfare of rural household increases than that of urban household. The cash transfer programme also induces the purchasing power of the households, leading to higher prices of commodities, and increase in consumer price index. Financing it through an increase in the VAT rate further aggravates the price effects. Meanwhile, financing the cash transfer programme through the increase in the VAT rate only improves government finances marginally. Thus, it is recommended that the while the government may provide cash transfers to

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household, increasing the VAT rate to fund the cash transfer might undermine the positive welfare-enhancing effects of the cash transfer.

Keywords: social investment, cash transfer, poverty reduction, welfare, Nigeria, CGE

Introduction

Poverty, inequality and unemployment continue to be major economic development challenges in Nigeria. According to data from the National Bureau of Statistics (NBS), national poverty rate increased from 27.2% in 1980 to 65.6% in 1996 and 69.0% in 2010, before declining to 40.1% in 2019. The World Poverty Clock data in 2019 also reveals that Nigeria has overtaken India as the country with the highest number of people living in extreme poverty with 86.9 million people current living in extreme poverty (Kharas, Hamel and Hofer, 2018). According to the data, Nigeria will have about 110 million people living in extreme poverty by 2030 if current pattern persists.

Similarly, inequality has worsened as the Gini coefficient increased from 0.356 in 2004 to 0.391 in 2016 before falling to 0.351 in 2019. The Theil index also increased from 0.217 in 2004 to 0.310 in 2016 (NBS, 2018a). In addition to growing poverty and inequality, unemployment has also increased significantly. Unemployment rate stood at 23.13% in the third quarter of 2018, which is more than double of the 9.9% recorded in the same quarter of 2015 (NBS, 2018b). The unemployment rate has since risen to 33.3% as at the fourth quarter of 2020.

These social and economic imbalances also have gender implications. Poverty is more prevalent among women and female-headed households compared to men and male-headed households. Unemployment data as at third quarter of 2018 reveals higher unemployment (26.6%) and underemployment (25.9%) among women than men (15.4% and 20.3%). The gender gap index of 0.64 (133th position) in 2019 compared to 0.65 (106th position) in 2013 also confirms limited progress towards gender equality in line with Goal 5 of the Sustainable Development Goals (SDGs).

To address the lingering human development challenges the country and improve the living standards of the population, the government initiated some policy reforms. One of these reforms is the launching of a social investment programme – the National Social Safety Net Programme. This programme is aimed at providing cash support to vulnerable groups in the society, especially women and youth. It involves a national cash transfer programme that provides targeted monthly cash transfers of ₦5,000 (\$12) to poor and vulnerable households, with the ultimate aim of graduating them out of poverty. According to the National Cash Transfer Office, about 1,955,077

households are benefitting from the programme. Also, the government signed the minimum wage bill into law. The law increased the minimum wage from ₦18,000 (\$43) to ₦30,000 (\$72) to address the increasing cost of living and high poverty rates in the country. This action was lauded by various stakeholders, especially labour unions; and there have been commentaries and debates on how this reform will enhance the welfare of workers and impact government financial standing and the economy.

However, financing these reforms is a challenge for the government given its limited fiscal space. Oil revenue accounts for 52% of government revenue, and non-oil tax revenue accounts for only 6% of the GDP. Therefore, the government initiated a VAT reforms as a way of generating revenue to finance the social investment programme and the minimum wage increase. The government increased the VAT rate from 5% to 7.5%. It is expected that this VAT reform will generate sufficient revenue to finance the social investment reform and the minimum wage increase.

But while the social investment programme and the minimum wage increase may be helpful for the poor in terms of improved income, the increase in the VAT may erode the benefits of the programme mainly due to higher prices and lower real income. However, there is no documented evidence on the economy-wide impacts of these reforms. This is the focus of this study. Thus, this study aims to assess the economy-wide impacts of the cash transfer programme, particularly paying attention to the macroeconomic and welfare effects. The paper also examines the implications of increasing the VAT rate to finance the cash transfer programme.

Overview of Methodology and Data

The methodological approach for this study is the computable general equilibrium (CGE) modelling. It uses a system of equations to model the economic behaviour of economic agents, and has been widely employed to assess the macroeconomic, distributional and welfare impacts of public policy. It is most appropriate for understanding the comprehensive economy-wide and distributional impacts of public policy (Nwafor et al., 2010). Thus, the CGE model in this study simulates the potential effects of the new minimum wage on various macroeconomic indicators - macro, structural, price, trade, fiscal and labour market.

The standard PEP 1-1 developed by Decaluwe et al. (2013) is the reference CGE model in this study. The PEP 1-1 model is a single-country static model. It separates capital and labour into several categories, and takes into account a broader set of tax instruments (for more on the PEP-1-1 model, see Decaluwe et al, 2013). Some adjustments are made to the model to better reflect

the Nigerian economy and address the specific objectives of this study. For instance, the standard model assumes full employment. But given the case of Nigeria, unemployment is included in the model using a wage curve (Blanchflower and Oswald, 1995). The model is implemented using GAMS software.

The social accounting matrix (SAM) is the baseline data used in CGE modelling. It shows the circular flow of income and expenses of economic agents and describes how agents allocate factors of production to sectors and how sectoral outputs are distributed among the economic agents. The latest SAM for Nigeria was published in 2010 based on 2006 national accounts data. According to Nwafor et al. (2010), the data for constructing the SAM were obtained from various publications of key government agencies such as the Central Bank of Nigeria, National Bureau of Statistics and Ministry of Agriculture and Water Resources. The main modules of the matrix include activities/sectors, commodities, factors of production, transaction costs, households, firms, government, taxes, savings and investment and rest of the world. The rest of the world and the associated taxes cover the international trade aspect of Nigeria's economic activities.

Between 2006 when the SAM was developed and now, the Nigerian economy has changed significantly in size and structure. Therefore, the 2006 SAM was updated to 2013 economic data (Omoju, Ikhide, Dimnwobi and Ehimare, 2019) using the cross entropy method implemented by SAMBAL (Lemelin, Fofana and Cockburn, 2013). The PEP-1-1 CGE model is used to calibrate the updated SAM to examine the impact of the cash transfer program.

Preliminary Results

The results of the analysis are presented in this section. The presentation of the results is limited to only the key variables of interest. The first and immediate impacts of the government cash transfer is through household income. As a result of the cash transfer, the income of households will rise (Figure 1). The increase in the income of households will lead to increase in the consumption of goods and services. However, the increase in the consumption of commodities varies. When the cash transfer is financed directly via the government budget, the consumption of all commodities except refined oil and road transport by urban household increase. The consumption of crop commodities by rural and urban households increase by 0.31% and 0.23% respectively (Table 1). The consumption of beverages, processed foods and tobacco products also increase by 0.36% and 0.25%. However, the consumption of refined oil and road transport by urban households decline by 0.03% and 0.01% respectively. When the cash transfer is financed by

the increase in the VAT rate, household consumption for all commodities increases except for the consumption of road transport by urban households.

A major observation from the results is that although consumption of commodities in both scenarios increase, the increase is much higher when the cash transfer is absorbed by the budget, relative to when it is financed by increase in VAT. This is expected. Increase in VAT is a reflection of increase in price, which is expected to lower consumption. Hence, when the government gives cash transfer, consumption increases, but the VAT imposed to finance it later increases price and drove down consumption. In both scenarios, prices increase (as a result of high consumption powers/demands and later high VAT rate) as show in Table 2. The increase in VAT further pushes up prices that are already under pressure as a result of high purchasing power. As shown in Figure 2, the rise in the prices of the commodities increase the consumer price index by 0.18% (when the cash transfer is absorbed by the budget) and 0.20% (when the cash transfer is paid for by increase in the VAT rate).

Overall, the combination of the income and price effects leads to an overall welfare effect (Figure 3). The welfare of rural household improves more than that of urban households, and welfare improvement is higher under the scenario where the cash transfer is absorbed by the budget. When the cash transfer is paid for by the budget, the welfare of rural household increases by 0.29% while that of urban households increase by 0.16%, and when the cash transfer is financed by increase in the VAT rate, the welfare of rural and urban households increase by 0.25% and 0.15%. The welfare of rural household is higher than that of rural households cash transfer to rural households has a bigger effect than cash transfer to urban households because the magnitude of the increase is much higher for the former. The government have been providing cash transfers to urban households before now. Hence, the increase in the transfer now is only marginal. The National Cash Transfer programme is the first time the government is providing cash transfers to rural households, and is received as a bigger positive shock. Hence, the bigger effect. The effect on welfare is higher when the VAT is absorbed by the government than when it is financed by increase in the VAT rate. This is because VAT increase dampen the effects of the cash transfer. The cash transfer is expected to increase household consumption, which will ultimately enhance welfare. But by increasing the VAT, households are faced by with higher prices which will reduce their consumption powers.

The implementation of the cash transfer programme also has effects on macroeconomic indicators such as government budget, real GDP and unemployment rate (Figure 4). When the cash transfer

is financed without external or additional financing sources (absorbed via the budget), it reduced (increases) government savings (deficit) by 0.87%. On the other hand, if the government increase the VAT rates to finance the cash transfer programme, government savings (deficit) will only reduce (increase) by 0.73%. This implies that the decision by the government to raise the VAT rate to finance the cash transfer programme only improve government finances marginally (by 0.14% points). In other words, increasing the VAT rates only reduces government deficit by 0.14% points. Also, the cash transfer leads to reduction in unemployment rate and increase in real GDP.

Conclusion and policy implications

This paper examines the macroeconomic and welfare impacts of the government social investment reforms, particularly the cash transfer programme. It further examines the relative impacts of the financing mechanism of the programme. The analysis shows that the government cash transfer has an immediate impact on increasing household income. The increase in household income will lead to increase in the consumption of goods and services, with positive effects on welfare. The effect on consumption is, however, higher when the cash transfer is absorbed by the budget relative to when it is financed by raising the VAT rate. The cash transfer programme also induces the purchasing power of the households, leading to higher prices of commodities, and increase in consumer price index. The positive welfare effects of the cash transfer is higher for rural households relative to urban households. The implementation of the cash transfer programme also has effects on macroeconomic indicators such as government budget, real GDP and unemployment rate. The decision by the government to raise the VAT rate to finance the cash transfer programme only improves government finances marginally relative to when it is absorbed by the budget. Also, the cash transfer leads to reduction in unemployment rate and increase in real GDP.

There are policy implications from this preliminary results. The cash transfer programme is effective in achieving the goals of improving welfare and enhancing macroeconomic outcomes. However, financing the cash transfer programme by increasing the VAT rate undermines these effects as the additional price increases caused by the VAT raise counterbalance the increase in consumption and welfare, while not making significant difference to government finance. Thus, it is recommended that the while the government may provide cash transfers to household as a welfare-enhancing mechanism, increasing the VAT rate to fund the cash transfer might undermine the positive welfare-enhancing effects of the cash transfer.

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Appendix

Table 1: Impact on household consumption (%)

Commodity code	Commodity name	Household location	Household consumption	
			Cash transfer absorbed by the budget	Cash transfer financed by VAT increase
crop	Crop production	Rural	0.31	0.25
		Urban	0.23	0.17
live	Livestock	Rural	0.19	0.16
		Urban	0.12	0.09
fish	Fisheries	Rural	0.18	0.15
		Urban	0.11	0.09
fore	Forestry	Rural	0.20	0.18
		Urban	0.13	0.10
bevg	Beverages, tobacco, and processed food	Rural	0.36	0.30
		Urban	0.25	0.18
text	Textile	Rural	0.34	0.29
		Urban	0.23	0.17
wood	Wood and furniture	Rural	0.28	0.27
		Urban	0.17	0.16
omfc	Other manufacturing	Rural	0.11	0.19
		Urban	0.02	0.09
roil	Refined oil	Rural	0.05	0.10
		Urban	-0.03	0.01
water	Water	Rural	0.23	0.29
		Urban	0.13	0.18
elect	Electricity	Rural	0.23	0.29
		Urban	0.13	0.18
rtra	Road transport	Rural	0.07	0.03
		Urban	-0.01	-0.05
otra	Other transport	Rural	0.16	0.16
		Urban	0.07	0.07
trad	Wholesale and retail trade	Rural	0.34	0.29
		Urban	0.23	0.18
hotl	Hotel and restaurant	Rural	0.33	0.29
		Urban	0.22	0.18
comm	Communication	Rural	0.27	0.24
		Urban	0.17	0.14
bser	Banking and financial services	Rural	0.25	0.23
		Urban	0.15	0.13
rest	Real estate	Rural	0.36	0.32
		Urban	0.25	0.21
educ	Education	Rural	0.32	0.29

		Urban	0.21	0.18
heal	Health	Rural	0.29	0.28
		Urban	0.18	0.17
oser	Other services	Rural	0.36	0.32
		Urban	0.25	0.21

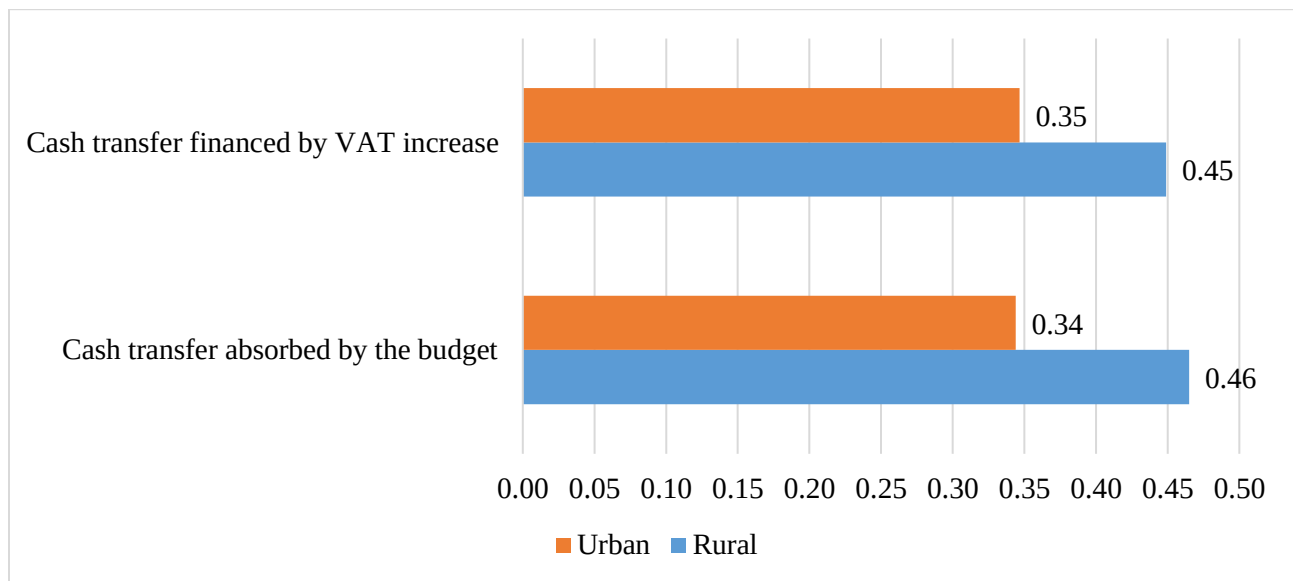
Source: Results

Table 2: Impacts on prices (%)

Commodity code	Commodity name	Domestic prices	
		Cash transfer absorbed by the budget	Cash transfer financed by VAT increase
crop	Crop production	0.29	0.28
live	Livestock	0.16	0.17
fish	Fisheries	0.16	0.17
fore	Forestry	0.16	0.18
bevg	Beverages, tobacco, and processed foods	0.21	0.21
text	Textile	0.19	0.20
wood	Wood and furniture	0.15	0.18
omfc	Other manufacturing	0.08	0.21
coil	Crude oil and natural gas	0.00	0.04
roil	Refined oil	0.04	0.15
omin	Other minerals	0.04	0.37
cons	Construction	0.04	0.09
water	Water	0.12	0.19
elect	Electricity	0.12	0.19
rtra	Road transport	0.11	0.15
otra	Other transport	0.12	0.19
trad	Wholesale and retail trade	0.19	0.20
hotl	Hotel and restaurant	0.18	0.20
comm	Communication	0.15	0.17
bser	Banking and financial service	0.20	0.24
rest	Real estate	0.20	0.21
educ	Education	0.18	0.20
heal	Health	0.16	0.19
pser	Public administration	0.17	0.19
oser	Other services	0.20	0.21

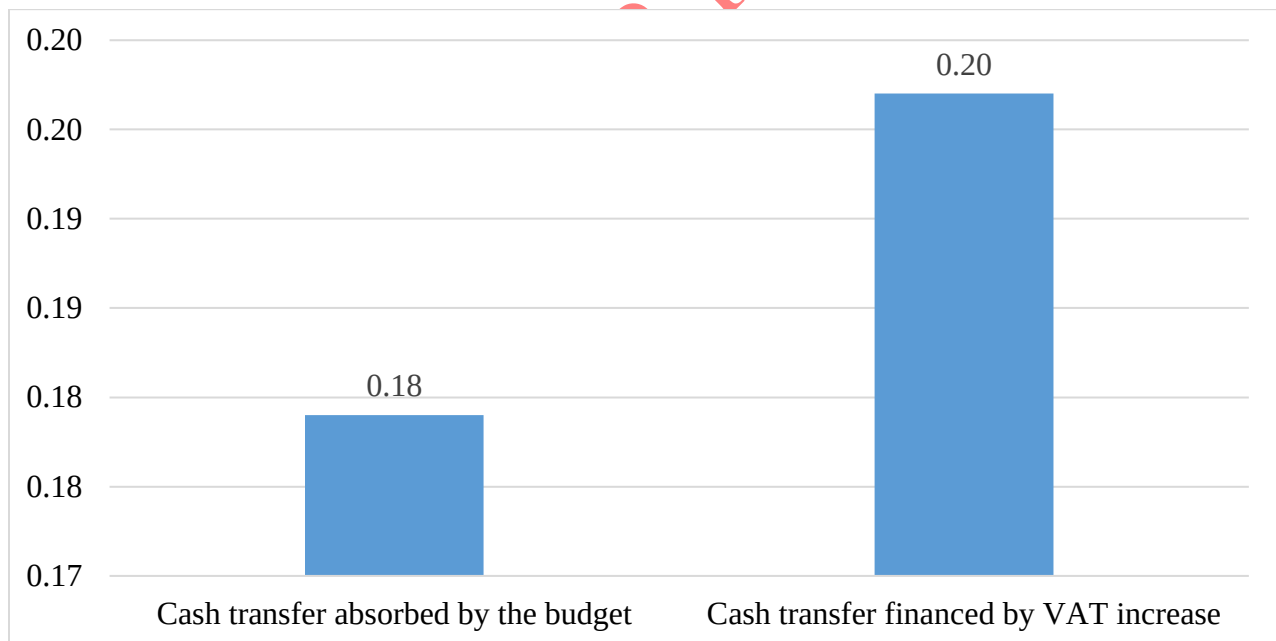
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Figure 1: Impacts on household income



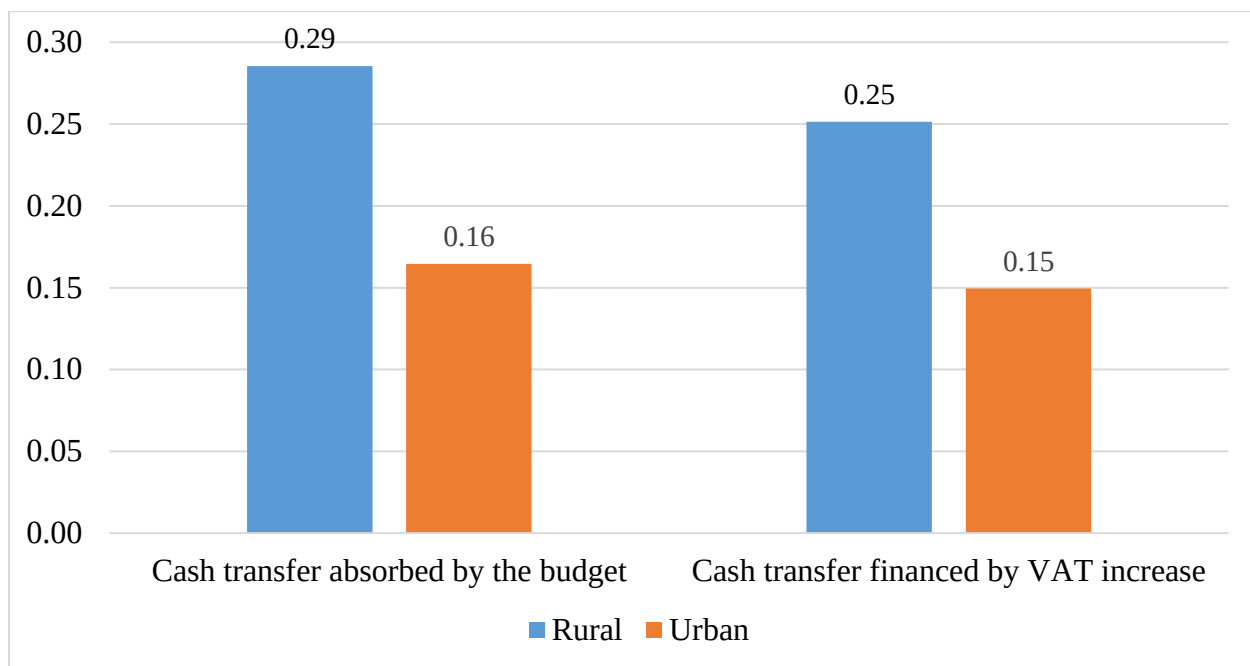
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Figure 2: Impacts on the consumer price index



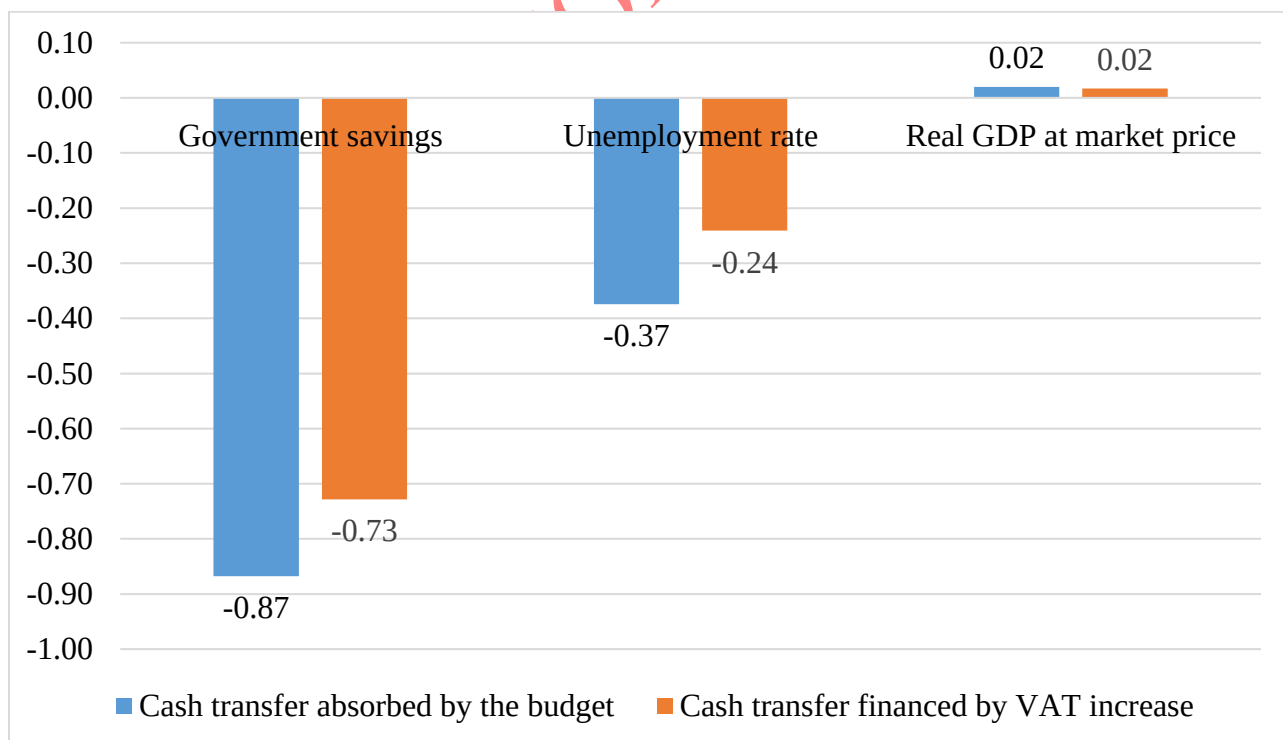
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Figure 3: Impacts on household welfare (measured by consumption budget)



Source: Results

Figure 4: Macroeconomic impacts



Source: Results